

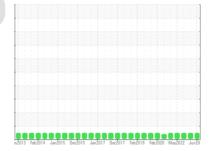
OIL ANALYSIS REPORT



G.LOPES CONSTRUCTION INC./Off-Road

D615 Diesel Engine

PETRO CANADA DURON SHP 15W40 (--- GAL)



Sample Rating Trend





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

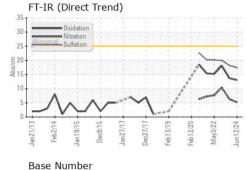
Fluid Condition

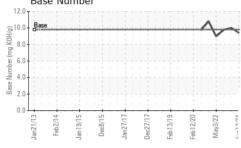
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

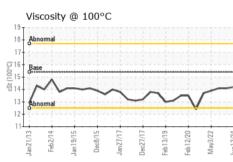
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0122947	PCA0104582	PCA0083438
Sample Date		Client Info		12 Jun 2024	18 Oct 2023	09 Jan 2023
Machine Age	hrs	Client Info		13192	13103	12931
Oil Age	hrs	Client Info		11918	12001	12280
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	24	9	21
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm		>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	2	1
Lead	ppm	ASTM D5185m	>40	<1	<1	<1
Copper	ppm	ASTM D5185m		<1	<1	<1
Tin	ppm		>15	<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	8	5	3
Barium	ppm	ASTM D5185m	0	0	0	0
				U	•	0
Molybdenum	ppm	ASTM D5185m	60	61	62	63
Molybdenum Manganese		ASTM D5185m	60			
•	ppm	ASTM D5185m		61	62	63
Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0	61 <1	62	63 <1
Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 1010	61 <1 972	62 0 928	63 <1 983
Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070	61 <1 972 1084	62 0 928 1098	63 <1 983 1177
Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150	61 <1 972 1084 1009	62 0 928 1098 1082	63 <1 983 1177 1033
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270	61 <1 972 1084 1009 1246	62 0 928 1098 1082 1235	63 <1 983 1177 1033 1299
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270 2060	61 <1 972 1084 1009 1246 3046	62 0 928 1098 1082 1235 3698	63 <1 983 1177 1033 1299 3573
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 1010 1070 1150 1270 2060	61 <1 972 1084 1009 1246 3046	62 0 928 1098 1082 1235 3698 history1	63 <1 983 1177 1033 1299 3573 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060	61 <1 972 1084 1009 1246 3046 current	62 0 928 1098 1082 1235 3698 history1	63 <1 983 1177 1033 1299 3573 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25	61 <1 972 1084 1009 1246 3046 current 6	62 0 928 1098 1082 1235 3698 history1 4	63 <1 983 1177 1033 1299 3573 history2 3 <1
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25 >20	61 <1 972 1084 1009 1246 3046 current 6 3	62 0 928 1098 1082 1235 3698 history1 4 0	63 <1 983 1177 1033 1299 3573 history2 3 <1 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25 >20	61 <1 972 1084 1009 1246 3046 current 6 3 2 current	62 0 928 1098 1082 1235 3698 history1 4 0 2	63 <1 983 1177 1033 1299 3573 history2 3 <1 0 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base	61 <1 972 1084 1009 1246 3046 current 6 3 2 current 0.3	62 0 928 1098 1082 1235 3698 history1 4 0 2 history1 0.5	63 <1 983 1177 1033 1299 3573 history2 3 <1 0 history2 0.2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7624 *ASTM D7624	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20	61 <1 972 1084 1009 1246 3046 current 6 3 2 current 0.3 5.2	62 0 928 1098 1082 1235 3698 history1 4 0 2 history1 0.5 6.3	63 <1 983 1177 1033 1299 3573 history2 3 <1 0 history2 0.2 10.4
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7624 *ASTM D7624	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30	61 <1 972 1084 1009 1246 3046 current 6 3 2 current 0.3 5.2 17.4	62 0 928 1098 1082 1235 3698 history1 4 0 2 history1 0.5 6.3 18.2	63 <1 983 1177 1033 1299 3573 history2 3 <1 0 history2 0.2 10.4 20.0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D7415 Method	0 1010 1070 1150 1270 2060 limit/base >25 >20 limit/base >3 >20 >30 limit/base	61 <1 972 1084 1009 1246 3046 current 6 3 2 current 0.3 5.2 17.4 current	62 0 928 1098 1082 1235 3698 history1 4 0 2 history1 0.5 6.3 18.2 history1	63 <1 983 1177 1033 1299 3573 history2 3 <1 0 history2 0.2 10.4 20.0 history2



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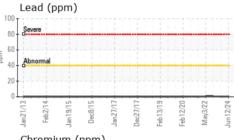


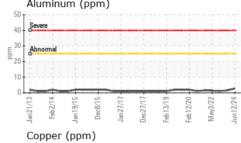
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

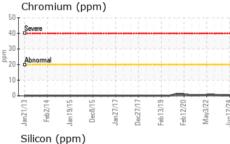
FLUID PROP	ERHES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	14.1	14.1

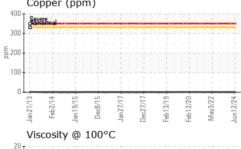
Sev	vere	1 1		1 1					
1	normal								
	~						~		
13-1	4	15	15	17	17	19	20	22	74
Jan21/13	Feb2/14	Jan 19/15	Dec8/15	Jan27/1	Dec27/17	Feb13/19	Feb 12/20	May3/22	Jun 12/24
03				-5		17	17	-	-

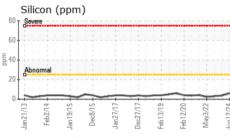
GRAPHS

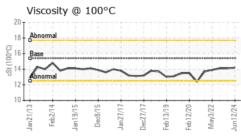


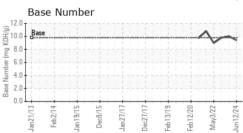
















Certificate 12367

Laboratory Sample No.

: PCA0122947 Lab Number : 06210361 Unique Number : 11083225

Test Package : MOB 2

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 14 Jun 2024 **Tested** : 17 Jun 2024

Diagnosed : 17 Jun 2024 - Wes Davis **G LOPES CONSTRUCTION** 565 WINTHROP ST

TAUNTON, MA US 02780

Contact: BUTCH MCGRATH bmcgrath@glopes.com T:

To discuss this sample report, contact Customer Service at 1-800-237-1369. * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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